

HYDROSTATIC AXIAL PISTON MACHINE WITH A SWASHPLATE DESIGN

ABSTRACT OF THE INVENTION

A hydrostatic axial piston machine has a swashplate, a cylinder block, a cylinder block bearing system, a brake to arrest the cylinder block, and a compensation device to relieve the cylinder block bearing system from axial engine forces. The compensation device is integrated into the brake. The brake has a brake piston loaded in the closing direction by a spring and has a relieving surface which acts in the opening direction and can be pressured by hydraulic pressure and is active opposite to the axial engine forces. The cylinder block bearing system has two helical roller bearings in an O-arrangement and the brake piston is an annular piston located axially between the helical roller bearings. A retaining ring of the spring is supported against the inner ring of a helical roller bearing provided to absorb axial engine forces.